## IN THE CLAIMS:

*Please find below a listing of all of the pending claims. The statuses of the claims are set forth in parentheses.*

1. (Currently Amended) A system for utilizing waste heat to provide power to an electronic device in a data center, said system comprising:

a plurality of racks, each of said plurality of racks housing at least one data center component configured to generate heat energy during operation thereof~~, said at least one data center component being housed in a rack configured to house a plurality of data center components at a plurality of locations along the rack;~~

a plurality of converters for receiving the heat energy generated by said at least one data center component in each of the plurality of racks, wherein the plurality of converters are ~~is~~ configured to convert the heat energy to electrical energy, and wherein the plurality of converters are ~~is~~ attached to each of the plurality of racks; and

a power supply operable to be recharged through receipt of the electrical energy converted by the converter, and wherein the power supply is configured to deliver the electrical energy to the electronic device.

2. (Original) The system according to claim 1, wherein said at least one data center component comprises one or more of a server, processor, microprocessor, rack power supply, and blower.

3. (Original) The system according to claim 1, wherein said power supply is configured to be trickle-charged by said electrical energy.

4. (Original) The system according to claim 3, wherein said power supply is at least one of a rechargeable battery and a capacitance device.

5. (Original) The system according to claim 1, wherein said power supply is part of an uninterruptible power source configured to supply electrical energy to the one or more data center components to enable relatively safe shutdown of one or more data center components in the event of a power outage.

6. (Original) The system according to claim 1, further comprising a heat sink connected to the at least one data center component for conducting heat generated by the at least one data center component to the converter.

7. (Original) The system according to claim 1, further comprising a heat pipe connected between the at least one data center component and the converter, wherein said heat pipe is configured to conduct heat generated by the at least one data center component to the converter.

8. (Original) The system according to claim 7, further comprising a heat sink in thermal connection between the heat pipe and the at least one data center component.

9. (Previously Presented) A system for utilizing waste heat to provide power to an electronic device in a data center, said system comprising:

at least one data center component configured to generate heat energy during operation thereof;

a converter for receiving the heat energy generated by said at least one data center component, wherein the converter is configured to convert the heat energy to electrical energy;

a power supply operable to be recharged through receipt of the electrical energy converted by the converter, and wherein the power supply is configured to deliver the electrical energy to the electronic device;

a plurality of heat pipes in thermal connection with a plurality of data center components; and

a thermal conduit in thermal connection with said plurality of heat pipes and the converter, wherein the thermal conduit is configured to conduct heat from the plurality of heat pipes to the converter.

10. (Original) The system according to claim 9, wherein the plurality of heat pipes are connected to the plurality of data center components via a plurality of heat sinks.

11. (Original) The system according to claim 9, wherein the thermal conduit comprises an accumulator operable to accumulate heat from the plurality of heat pipes for conduction to the converter.

12. (Original) The system according to claim 9, wherein the thermal conduit enables sufficient heat transfer from the plurality of data center components to the converter to enable the converter to supply the power supply with electrical energy in a configuration yielding relatively inefficient conversion of heat energy into electrical energy by the converter.

13. (Original) The system according to claim 9, wherein the thermal conduit comprises a relatively large surface area and is positioned at a location that is spaced from the plurality of data center components.

14. (Original) The system according to claim 1, further comprising a fan configured to exhaust heated air flow from the at least one data center component, wherein the converter is located in a path of the heated air flow.

15. (Canceled)

16. (Previously Presented) A system for utilizing waste heat to provide power to an electronic device in a data center, said system comprising:

at least one data center component configured to generate heat energy during operation thereof;

a converter for receiving the heat energy generated by said at least one data center component, wherein the converter is configured to convert the heat energy to electrical energy;

a power supply operable to be recharged through receipt of the electrical energy converted by the converter, and wherein the power supply is configured to deliver the electrical energy to the electronic device; and

one or more racks housing the at least one data center component, wherein said one or more racks are categorized into one or more micro-grids within a data center, and wherein the one or more converters of the racks of one of the one or more micro-grids are configured to supply electrical energy to an uninterruptible power source configured to supply power to enable a relatively safe shutdown of one or more data components housed in the racks of the one of the one or more micro-grids in the event of a power outage.

17. (Original) The system according to claim 1, wherein the at least one data center component comprises at least one apparatus of an air conditioning unit.

18. (Original) The system according to claim 1, wherein the electronic device comprises one or more of an environmental condition sensor, an alarm, a light-emitting diode, and a location aware device.

19. (Original) The system according to claim 1, wherein the converter comprises at least one of a pyroelectric converter, a thermoelectric device, and a thermoionic device.

Claims 20-34. (Canceled).